


ANTARCTICA: THE WORLD'S MOST FASCINATING ICEBOX

Ira Wolfert

Readers Digest, Vol. 87, No. 521, Sept. 1965

POLAR  
PAM  
6350

POLARPAM



Digitized by the Internet Archive  
in 2022 with funding from  
University of Alberta Library

Man is by no means *conquering* Nature  
in this harsh and bewitching land, but  
he's unlocking many of her secrets

# ANTARCTICA: The World's Most Fascinating Icebox

BY IRA WOLFERT

**E**XPLORING a continent is one of man's oldest adventures. Never before, though, has he had a chance to do it the way it's being done in the antarctic today. In 1961, 12 nations ratified a treaty agreeing to reserve Antarctica exclusively for scientific research for 30 years. As a result, scientists are now busily pursuing an intense program of research and exploration on a year-round basis. It's a fantastic project, unique in history.

They're at work in an amazing land, nearly twice as big as the United States. The South Pole it-

self is in the midst of nothing at all — just flat, blank, snow-covered ice. But elsewhere on the continent there are jagged mountains, with all but their peaks buried in ice and snow; a lake — covered by more than 12 feet of ice — whose depths register a temperature of 80° F.; violet and green ice; a smoking volcano; penguins in rookeries of many thousands, sometimes hundreds of thousands. There were times when I felt that I was walking in the sky because a sunset had encased me, the fields of snow reflecting the hues in the sky with breathtaking accuracy. At other



times, when I exhaled, a bloom of tiny, exquisite ice crystals shimmered into the air and fell like a rain of diamonds.

The coldest temperature officially recorded on earth was minus 126.9° F. at one of the Russian bases in Antarctica. The mean annual temperature at the South Pole is 56.7° below zero. Over much of the rest of the continent, it is 40° below or worse most of the time. "It's the world's most fascinating icebox," one scientist said.

**Touch-and-Go Landings.** Of the antarctic programs being carried on by various countries, the United States' is the most extensive. Geologists, biologists, meteorologists, algologists, glaciologists, cartographers, scuba divers—in all, more than 3200 Americans—were at work on and around the continent during the 1964-65 season. Some 27 million dollars was spent, seven million by the National Science Foundation, 20 million by the U. S. Navy on Operation Deep Freeze—logistic support for the scientists.

Is the operation efficient? "They've got it so well organized that a party of geologists can do in two months what, until this year, would have taken three entire seasons," says Dr. Charles R. Bentley, geologist from the University of Wisconsin.

Weather permitting, never a day goes by that planes and helicopters

aren't giving aid to researchers. It is not unusual for 12 aircraft to be aloft at once, flying supplies to the South Pole, doing aerial mapping, reconnoitering terrain for men traveling over land never before trod by human feet, making touch-and-go landings to drop off or pick up field parties.

"A touch-and-go landing," explained Lt. Comdr. Bert Johnson as we were about to make one, "is where you touch the ground to see if it's safe and go like hell if it ain't."

**Radio-Carrying Penguins.** From October to March the daylight lasts 24 hours, and navy work goes on around the clock in 12-hour shifts. At two o'clock one morning, with the sun shining brightly, the American supply base near McMurdo Sound was alive with typically varied and extraordinary activities.

A traxcavator (an excavating and forklift truck on tracks) lumbered by with a load of snow to melt for water. It was followed by a tractor hauling an 80-foot sled train full of materials for the permanent housing (built to last 30 years) now going up at McMurdo to replace plywood and canvas huts constructed when exploration was on a maybe-never-again basis. The new housing will have electric heating from a nuclear power plant, hot-and-cold running water from desalinated sea water pumped out from under the ice, plus refrigerators—to keep food from freezing.

On McMurdo Sound itself, Arthur DeVries of Stanford University was preparing to trap fish to study their metabolism. He attached one end of a net to a harness, the harness to a seal, then shoved the seal down a hole in the ice. The nearest hole was a quarter mile away. When the seal came up through that one, the harness was unhooked and what everybody else had thought was impossible—spreading a large net *under* ten feet of ice—was accomplished by DeVries without taking his pipe out of his mouth.

Four men took off in a helicopter. Two of them, who called themselves sea-cowboys, were on their way to brand seals in an effort, eventually, to gauge their ages and trace their wanderings. The other two, trying to determine how penguins are able to navigate so precisely over such vast distances across the featureless landscape, were carrying tiny radio transmitters to strap onto the birds so their course could be tracked.

Meanwhile, at the South Pole, ten men were starting out in three tractors on a two-month, 900-mile zigzag traverse, through unexplored territory, toward the abandoned Soviet station at the antarctic's farthest inland point, sometimes called the Pole of Relative Inaccessibility. Hooked on behind the tractors were six trailers carrying scientific instruments, spare parts, explosives and three tons of food.

The trailers rode on enormous tires in which extra fuel for the trip was stored.

### A Window on the Unknown.

There were more than 70 scientific research projects in the antarctic this season. One of the continent's attractions is that it is a land mass surrounded by an ocean, unlike the arctic which is an ocean surrounded by land. In the antarctic, polar conditions and science can meet on a stable platform, where prolonged studies are possible.

Seals, for instance, have become a subject of lively interest in fields as diverse as medicine, sonar and submarine design. Physiologists have found that seals are able to shut off the circulation in their outer surface and extremities to concentrate the blood in the vital organs so they can conserve their oxygen supply. The Weddell seal can hold its breath for more than 30 minutes and can dive to the hull-crushing depth of 1400 feet. It is thought that this seal navigates under ice by making sounds—one of which is hauntingly melodious—and reading the echoes.

Biologists were amazed to find that the Antarctic Ocean supports larger numbers (although fewer kinds) of plants and animals than any other. (Among these is the biggest animal in the world, the Blue Whale.) Scientists worrying about feeding the world's expanding population are studying this phenomenon with interest.



The antarctic also provides a window on unknown facets of nature's mechanisms. For example, tropical trees and plants once grew on the continent. In several places, petrified wood 270 million years old and coal beds up to 25 feet thick have been found. The coal is hard, and many slabs are imprinted with different ancient plant fossils. It's like turning the pages of a book.

Is the tropics-to-deep-freeze climate change temporary or permanent? Is it the result of a variation in solar activity? Or of the continent's breaking off and drifting away from some previous position closer to the equator? Or of some alteration of the earth's axis?

These questions are of moment to all of us, as about 90 percent of the ice on earth is in the antarctic. If it were ever to melt, the level of all the oceans would be raised some 250 feet, redrawing the map of the earth. Even a thaw too minor to make any significant change in ocean levels could over the long run affect the global weather pattern profoundly.

**Landscape With Booby Traps.** Some of the greatest hazards to man in Antarctica occur when abnormal conditions cause one of nature's booby traps to explode in his face. I learned about this in a "white-out."

I had left camp for a stroll, when the color of the air began to change. I was soon enveloped in a uniform white light that blotted out

shadows and made depth perception impossible. Air and ground had become the same color, and I had the eerie feeling that I was wandering around inside a Ping-Pong ball. Explanation: light was being reflected back and forth between white cloud layer and white snow, destroying all contrasts, and making it impossible to tell where the sky left off and the ground began.

The inevitable happened. I put my foot down on what turned out to be empty air over a gully and fell and slid some 20 feet. Fortunately, I had worn two of the three pairs of gloves I had been issued, and after I climbed out of the gully I threw a mitten ahead of me at each step to make sure that what I was about to put my foot on was really there. I was learning that this is still a country where you can walk five minutes in any direction away from a base and find yourself lost.

Then there's the wind. It comes up in nothing flat, and the French reported its reaching a speed of 200 miles an hour before the instruments at their base broke. There's no overture of sound. Abruptly you're engulfed in the drumming and shrieking of a blizzard that goes on and on without letup—for nine days once, while I was there.

"Men haven't conquered nature anywhere, here least of all," said Maj. Adrian Hayter, commander of



What's better than  
one shield?

Two

(and only  
Kotex napkins  
have two!)

1. A polyethylene shield to prevent staining.
  2. An exclusive safeguard shield to provide even absorbency.
- These two shields, plus two moisture-proof, no-chafe side barriers make Kotex the world's safest, most comfortable napkin. Of course, women *try* other napkins. But they usually come back to Kotex. Exclusive two-shield protection is available in proportioned Kotex Regular, Super, and Slenderline napkins.



**More women use Kotex napkins than all others combined**

KOTEX is a trademark of Kimberly-Clark of Canada Limited



New Zealand's Scott Base. "They've only found the terms under which nature will permit them to operate."

**Roads to Survival.** Nature has equipped every living thing in the antarctic except man, who is an outsider, with boundlessly ingenious natural devices for enduring the harsh climate. The fish have certain chemical substances in their blood which, scientists think, act as antifreeze and keep their body fluids from freezing. The insects, of which some 60 species have been discovered, are active only when the sun has heated their surroundings above freezing. "They have a practically instantaneous reversible hibernation," says entomologist J. Linsley Gressitt, of Hawaii's Bishop Museum. "When in cold-stupor, they can be activated simply by breathing on them." If ice forms over their resting place as they sleep, they can wait a long time for it to melt—some insects have revived themselves from hibernations thought to have lasted 70 years.

Do these marvelous devices enable any of these creatures to do more than merely struggle to survive? During a weekend with 60,000 penguins, I found indications that these birds seem to enjoy a remarkably successful adaptation to the harsh environment.

The Adélie penguins spend most of their time on ice floes at sea. They feed on shrimp, and, though they cannot fly, they can swim at

speeds up to 30 m.p.h. Every October, they go ashore to breed, finding their way to the same spot in the same rookery. After the female lays her two eggs, she returns to the sea to restore her depleted body, and the male takes over the domestic duties. He can go without food for as long as six weeks.

**Welcome Home.** At Cape Hallett, I saw the females returning to the rookery. Plump, sleek, shining, their white spotless, their black gleaming, they waddled in large groups over the ice and separated to go to their respective nests.

I couldn't stop grinning. The Adélies demonstrate emotion for one another graphically in what scientists call "mutual display." In each nest to which a female returned, the male jumped up from the eggs, stood on tiptoe facing his mate, and, with head and neck swaying, let out repeated, raucous "ga-ga-ga" noises.

At the end, when the male had started off to feed himself and the female had taken over the nest, I noticed that she would stand up every now and then, look down at the eggs under her and go into mutual display all over again.

**On to the Moon.** On my way back to the United States, I stopped in Christchurch, New Zealand. There I talked with a National Aeronautics and Space Administration representative from Washington who is involved in planning for the exploration of the moon.



# How come so many parents are blind to the Fourth Necessity?

The need for food, clothing, and shelter—the first three necessities—rides a parent's shoulders every day.

But for many young couples, the need for the Fourth Necessity—*enough* life insurance to pay for the other three if something happens to dad—seems pretty remote.

So, it's easy to let it slide.

What most young couples don't realize is that providing *enough* life insurance needn't put a crimp in their budget.

You'll find your Metropolitan adviser knows

lots of tidy ways to keep the tab down.

Why not ask him? He'll give you clear, straight answers. He'll also give you Metropolitan's Family Security Check-Up—a free, written analysis that shows you exactly where you stand now and helps you prepare for the future. There's no obligation . . . *except to those you love.*

**Millions choose Metropolitan Life**  
—more in Canada than any other company





"We're keeping an eye on the Antarctica program," he told me. "It's as close as men can come on earth to doing the job we're likely to want to do."

So a great new age of exploration is speeding through its dawn.

Once nations looked to their explorers for gold. Today, in the antarctic or on the moon, it's knowledge. That is not so different as it seems, for, in the final analysis, knowledge is the goose that lays the golden eggs.



### *For Valor*

ONE DAY last December Capt. Roger H. C. Donlon, 30, of Saugerties, N.Y., stood at rigid attention in the East Room of the White House and listened to the citation that accompanied the Medal of Honor which President Lyndon Johnson hung about his neck. In the language that has been traditional since Congress first authorized the decoration in 1862, the citation noted that Donlon, the first man to receive the medal in South Vietnam, had "distinguished himself by conspicuous gallantry and intrepidity."

It failed to mention the handkerchief which he had used to plug a belly wound — to keep his life from leaking away as he plunged through curtains of exploding metal to rally the 11 Americans under his command.

It somehow neglected also to note how the captain appeared to the other men in Special Forces Detachment A-726, as they saw him silhouetted against the flames that danced from the thatched huts in the compound.

When the citation seeks to explain what happened in the predawn hours of the 6th of July at Nam Dong, as a heavy Viet Cong battalion hit the American camp in a surprise assault, it says: "Upon the initial onslaught, he swiftly marshaled his forces and ordered the removal of the needed ammunition from a blazing building."

Lt. Julian Olejniczak, who was there as Donlon's executive officer, remembers the Old Man moving from position to position, rallying the team members, when "it was suicide to raise your head."

Not one of the nine survivors of the five-hour fire fight will forget how their captain moved around the perimeter — first running, then hobbling and at last crawling, as blood seeped from his four wounds — or how, as the end approached, he found a radio to guide the flare planes. Nor will they forget how Donlon remembered to observe military courtesy when a senior officer arrived with a relief column. "Request permission," he said, "to turn over my command."

— *Life*



Date Due


01606

Pam: (\*7)  
WOL

WOLFERT, Ira  
AUTHOR

Antarctica: the world's most  
TITLE fascinating icebox.

DATE  
LOANED

BORROWER'S NAME

DATE  
RETURNED

01606

BOREAL INSTITUTE  
LIBRARY

University of Alberta Library



0 1620 0340 2284